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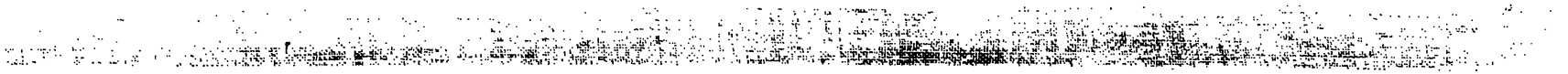

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J. W. POWELL, DIRECTOR.

RECORD

OF

NORTH AMERICAN GEOLOGY FOR 1891

BY

NELSON HORATIO DARTON

WASHINGTON
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RECORD OF NORTH AMERICAN GEOLOGY FOR 1891.

By Nelson Horatio Darton.

INTRODUCTORY.

This work is the continuation of the record for 1890,[1] and comprises publications received during the year 1891.

The literary scope of this record includes geologic publications printed in North America, and publications on North American geology wherever printed. Purely paleontologic or mineralogic papers are omitted.

The entries are comprised in the two following classes, all arranged in a single alphabetic sequence:

I. *Principal entries.*—Consisting of full titles of separate contributions classified by authors, together with an abbreviated reference to the containing publication and a short note descriptive of the geologic contents. Imprint dates are given only when other than 1891, and size of page when other than octavo. The extent of papers less than a page in length is indicated thus: ⅛ p., ¼ col., 3 lines.

II. *Subject references.*—Each consisting of a condensed title of paper, and the author's name for cross-reference to a principal entry. These are essentially index references, but they are entered under a limited number of headings, of which a classified key is given on the next page.

[1] Bulletin U. S. Geological Survey, No. 91. Washington, 1891.

CLASSIFIED KEY TO THE SUBJECT ENTRIES.

(1) GEOGRAPHIC SUBJECTS.

Alabama.
Alaska.
Arizona.
Arkansas.
Asia.
Australia.
California.
Canada (including all of British America).
Central America.
Colorado.
Connecticut.
Dakotas.
Delaware.
East Indies.
Europe.
Florida.
Georgia.
Hawaiian Islands.
Idaho.
Illinois.
Indiana.
Indian Territory (and "Public land strip").
Iowa.
Kansas.
Kentucky.
Louisiana.
Maine.
Maryland (including District of Columbia).
Massachusetts.
Mexico.
Michigan.
Minnesota.
Mississippi.
Missouri.
Montana.
Nebraska.
Nevada.

New Hampshire.
New Jersey.
New Mexico.
New York.
New Zealand.
North Carolina.
Ohio.
Oregon.
Pennsylvania.
Rhode Island.
South America.
South Carolina.
Tennessee.
Texas.
Utah.
Vermont.
Virginias.
Washington.
West Indies.
Wisconsin.
Wyoming.

(2) STRATIGRAPHIC SUBJECTS.

Archean and Algonkian, with sub-headings as follows:
- Eastern Canada.
- Lake Superior to Lake Huron region and western Canada.
- Mississippi river to Rocky mountains.
- New England.
- New York to Georgia.
- West of the Rocky mountains.
- Nomenclature.

Cambrian, with sub-headings as follows:
- Appalachian (Vermont to Alabama).
- Canada.
- Illinois.
- Lake Superior region.
- West of the Mississippi river.
- General and nomenclature.

Carboniferous (including Permian), with sub-headings as follows:
- Appalachians to Mississippi river.
- Canada.
- Mississippi river to Rocky mountains.
- Rocky mountains to Pacific coast.
- Virginia to Alabama.
- General and nomenclature.

Cretaceous, with sub-headings as follows:
- Atlantic coast region.
- Canada.
- Illinois.
- Kentucky.
- Mexico.
- Mississippi river to Rocky mountains.
- Pacific coast region.
- Nomenclature.

Devonian, with sub-headings as follows:
- Appalachians (New York to Alabama).
- Appalachians to Mississippi river.
- Canada.
- West of the Mississippi river.
- General and nomenclature.

Jura-Trias, with sub-headings as follows:
- Mississippi river to Rocky mountains.
- Newark formation (Nova Scotia to Virginia).
- West of the Rocky mountains.
- West Canada.
- General and nomenclature.

Pleistocene, with sub-headings as follows:
- Alaska.
- Appalachians to Mississippi basin.
- Atlantic coast region.
- Central America.
- General.
- Great lakes region and Eastern Canada.
- Mississippi basin to Rocky mountains.
- Rocky mountains to Pacific coast.
- Western Canada.

Silurian, with sub-headings as follows:
- Appalachians (Vermont to Alabama).
- Appalachians to Mississippi river.
- Canada.
- West of Mississippi river.
- Nomenclature.

Tertiary, with sub-headings as follows:
- Alaska.
- Atlantic coastal plain.
- Canada.
- Gulf states (Florida to Texas, and Arkansas).
- Illinois.
- Kentucky.

Mississippi river to Rocky mountains (north of Arkansas).
Pacific coast region.
Tennessee.
General and nomenclature.

(3) OTHER SUBJECTS.

Geologic philosophy, with sub-headings as follows:
Deformation.
Petrology.
Glaciology.
Ore deposits.
Physiographic geology.
Miscellaneous.

Petrography.

RECORD.

A.

ADAMS, Frank D. On some granites from British Columbia and the adjacent parts of Alaska and the Yukon district.

Canadian Record of Science, vol. 4, pp. 344–358.

Description of their petrography and discussion of the origin of certain secondary minerals which they contain.

— Notes to accompany a tabulation of the igneous rocks, based on the system of Professor H. Rosenbush.

Canadian Record of Science, vol. 4, pp. 463–469, pl.

Petrographic. Accompanied by a folded table.

— [Summary report on surveys in the St. Maurice district, eastern townships.]

Canada, Geol. Survey, Reports, vol. 4, new series, Report A., pp. 34–35, ½ p. 1890.

Includes notes on occurrence and character of the crystalline limestones and gneiss.

Alabama. Appomattox formation, McGEE.

Coal measures of plateau region, McCALLEY.

Coal measures of Blount county, GIBSON.

Cambrian of North America, WALCOTT, C. D.

Columbia formation, McGEE.

Cretaceous stratigraphy, WHITE, C. A.

Cretaceous of North America, WHITE, C. A.

Dates of origin of certain topographic forms, DAVIS.

[Flora of Tuscaloosa formation], FONTAINE.

Map of Cahaba coal field, McCALLEY.

Preface [Report on coal of plateau country], SMITH.

Overthrust faults of the southern Appalachians, HAYES.

Alabama—Continued.

Post-Pliocene subsidence, SPENCER.

Stones for building, MERRILL.

Titanic oxide [in soils], DUNNINGTON.

Variations in Cretaceous and Tertiary, LANGDON.

Warrior coal field, TRAZER.

Alaska. Expedition to Mount St. Elias, RUSSELL, I. C.

Explorations in Alaska, RUSSELL, I. C.

Fossil plants from near Mount St. Elias, KNOWLTON.

Granites from British Columbia, Alaska, etc., ADAMS.

Muir glacier region, CUSHING. WRIGHT.

Sands from Yakutat bay, STANLEY. BROWN.

AMERICAN GEOLOGIST. The Crenitic hypothesis.

Am. Geologist, vol. 8, pp. 110–114.

Review of T. S. Hunt in "Mineral Physiology and Physiography. A second series of chemical and geological essays." 2nd edition.

— Geological survey of New Jersey. Annual Report for 1890. John C. Smock, State Geologist. Trenton, 1891, p. 305, three maps.

Am. Geologist, vol. 8, pp. 120–121.

Reviews certain conclusions in a contained paper by F. L. Nason, on the post-Archean age of the white limestones of Sussex county, in their bearing on the age of the iron ores and limestones of the eastern New York and western New England region. Also reviews the statements concerning the relations of the blue to the white limestones.

— Supposed Trenton fossil fish.

Am. Geologist, vol. 8, pp. 177–180.

Review of the statements of C. D. Walcott on the discovery of fossil fish in the Trenton of Colorado to the Geological Society of America, in August, 1891.

Arizona. Analysis of sandstone, CHATARD.
Cambrian of North America, WALCOTT.
Devonian and Carboniferous, correlation, WILLIAMS, H. S.
Fauna of Lower Cambrian, WALCOTT.
Manganese deposits, PENROSE.
Meteoric iron locality, FOOTE.
Stones for building, MERRILL, G. P.
Arkansas. Appomattox formation, MCGEE.
Bauxite, BRANNER.
Basic dikes outside of syenite areas, KEMP.
Comanche series of Texas—Arkansas series, HILL.
Cretaceous of North America, WHITE, C. A.
Crowley's Ridge, CALL. SALISBURY. BRANNER.
Devonian and Carboniferous, correlation, WILLIAMS, H. S.
Fayetteville–Huntsville section, HARRIS.
Geology of Washington county, SIMONDS.
Geology of western Arkansas, WINSLOW.
Igneous rocks of Arkansas, WILLIAMS, J. F.
Introduction [Washington county], BRANNER.
Arkansas—Continued.
Manganese deposits, PENROSE.
Novaculites, GRISWOLD.
Origin of manganese ores of northern Arkansas, PENROSE.
Reade's theory of origin of mountain ranges, READE.
Relationship of Pleistocene to pre-Pleistocene, CHAMBERLIN and SALISBURY.
Stones for building, MERRILL, G. P.
Tabulation of dikes, KEMP and WILLIAMS.
Tertiary silicified woods, CALL.
Titanic oxide [in soils], DUNNINGTON.
Topographic features of Arkansas marble, HOPKINS.
ARMS, I. M. Clay concretions of the Connecticut river.
Canadian Record of Science, vol. 4, pp. 237–241.
Includes an account of the beds in which they occur and a discussion of the origin of concretions.
Asia. Cambrian of North America, WALCOTT.
Progress of mining in China, CLARK, E.
Review of Quaternary era, UPHAM.
Titanic oxide [in soils], DUNNINGTON.
Australia. Glaciers of New Zealand, JACK.
Mount Morgan mine, Queensland, RICKARD. WEED.

B.

[BAILEY, L. W.] [Summary report on work in northern New Brunswick and Quebec.]
Canada, Geol. Survey, Report, vol. 4, new series, Report A, pp. 35–38. 1890.
Includes reference to occurrences of Silurian rocks.
BARLOW, Alfred. On the nickel and copper deposits of Sudbury, Ontario.
Ottawa Naturalist, vol. 5, pp. 51–71.
Includes brief description of the geologic features of the deposit.
BARUS, C. The contraction of molten rock.
Amer. Jour. Sci., 3d series, vol. 42, pp. 498–499, ⅛ p.
A discussion of physical values.
BAUR, G. On the origin of the Galapagos islands.
Am. Naturalist, vol. 25, pp. 307–319.
General discussion, mainly with reference to the bearing of their fauna and flora.
BEACHLER, Charles S. The rocks at St. Paul, Indiana, and vicinity.
Am. Geologist, vol. 7, pp. 178–170.
Description of the stratigraphic column.
BECKER, George H. Structure of a portion of the Sierra Nevada of California.
Geol. Soc. Am., Bull., vol. 2, pp. 49–74.
Abstracts, **Am. Geologist**, vol. 7, pp. 201–202. 1890, ⅔ p. **Am. Naturalist**, vol. 24, p. 276, ⅛ p. 1890.
Account of a complexly faulted area and discussion of the mechanism of the dislocations.
—— Antiquities from under Tuolumne Table mountain in California.
Geol. Soc. Am. Bull., vol. 2, pp. 189–198, pl. 7.
Abstracts, **Am. Geologist**, vol. 7, pp. 132, 258; **Am. Naturalist**, vol. 25, p. 366, ⅓p.
Includes a discussion of the correlation of the lavas and gravels with eastern deposits.

BECKER, George H.—Continued.

——Notes on the early Cretaceous of California and Oregon.

Geol. Soc. Am., Bull., vol. 2, pp. 201-206.

Abstracts, Am. Geologist, vol. 7, p. 258, ⅓ p; Am. Naturalist, vol. 25, p. 365, 6 lines.

Describes relations at a newly discovered fossiliferous locality at Riddles, Oregon, and discusses its bearing on the history and correlation of the Shasta group. Also announces an occurrence of fossiliferous Triassic beds and points out their relations to a post-Triassic upheaval with granitic intrusions. Discussed by G. M. Dawson, J. S. Diller, and C. A. White, pp. 207-208.

—— Report, California division.

U. S. Geol. Survey, 10th Report, J. W. Powell, pp. 141-144, 1890.

Abstract, ib., pp. 27-28, ⅔ p.

Includes references to the massive rocks in the gold belt and to localities exhibiting glaciation in the Yosemite region, and a discussion of the nature and origin of "dome" structure in granite in the Sierra Nevada.

BELL, Robert. The nickel and copper deposits of Sudbury district, Canada.

Geol. Soc. Am. Bull., vol. 2, pp. 125-137.

Abstract, Engineering and Mining Jour., vol. 51, p. 328, ⅔ p. 4°.

Description of the deposits and of the geology of the region, and discussion of the genesis of the ores.

[——] [Summary report on surveys in the Sudbury district.]

Canada Geol. Survey, Reports, vol. 4, new series, Report A, pp. 29-32. 1890.

Includes a brief account of the relations of Huronian and Laurentian rocks in the region examined, and notes on the copper and nickel deposits.

BOWERS, Stephen. Orange county.

California, 10th Report of Mineralogist, pp. 399-409.

Description of geology; notices of fossiliferous localities, with lists of Cretaceous and Tertiary fossils, and notes on mineral resources.

—— Ventura County.

California, 10th Report of Mineralogist, pp. 758-762, 1890.

Notes on bituminous rock, building stones and fossiliferous Miocene on the upper Sespe.

BOUVÉ, T. T. Kame ridges, kettle-holes, and other phenomena attendant upon the passing away of the great ice sheet in Hingham, Massachusetts.

Boston Soc. Nat. Hist., Proc., vol. 25, pp. 173-182, pl. VI.

Description of the various features about Hingham, and discussion of their origin and bearing on the glacial history of the region.

BOYD, C. R. Map of the mineral resources and railway facilities of southwest Virginia. 1891.

BRAINERD, Ezra. The Chazy formation in the Champlain valley.

Geol. Soc. Am., Bull., vol. 2, pp. 293-300, pl. 11.

Abstract, Am. Geologist, vol. 7, p. 378, ⅛ p.

Descriptions of detailed sections, and note on the distribution of the Chazy in other regions.

BRANNER, John C. The relations of the State and National Geological Surveys to each other and to the geologists of the country.

Am. Assoc. Adv. Science, Proc., vol. 39, pp. 219-237.

—— Preface.

Arkansas Geol. Survey, Report for 1889, vol. 2. The Geology of Crowley's Ridge by R. E. Call, pp. XI-XIX, map.

Includes a brief discussion of the origin of Crowley's Ridge.

—— Introduction.

Arkansas Geol. Survey, Report for 1888, vol. 4, Geology of Washington county by F. W. Simonds. pp. XI-XIV

Includes a stratigraphic column of the formations of Washington county, and references to the Eureka (Devonian?) shale and Lower Silurian sandstone exposures.

—— Bauxite in Arkansas.

Am. Geologist, vol. 7, pp. 181-183.

Science, vol. 17, p. 171, ½ p. 4°.

Engineering and Mining Jour., vol. 51, p. 114, ⅔ col. 4°.

Description of its character, geologic relations and composition.

BRIGHAM, W. T. On the recent eruption of Kilauea.

Am. Jour. Sci., 3d series, vol. 41, pp. 507-510.

Report to W. D. Alexander, Surveyor General.

BROADHEAD, G. C. The Ozark series.

Am. Geologist, vol. 8, pp. 33-35.

Account of the distribution, character, and stratigraphy of the series in Missouri, and discussion of the relations and equivalency of its members.

BROOKS, T. B. Geology of the Marquette iron region. A correction.

Am. Jour. Sci., 3d series, vol. 41, p. 160, ⅛ p.

Notice of the drift nature of a certain crystalline rock outcrop referred to in his report; Geology of Michigan, 1873, vol. 1.

BROWN, J. A. Amador county.

California, 10th Report of Mineralogist, pp. 98-123. 1890.

Account of mines with incidental references to geologic features.

—— Calaveras county.

California, 10th Report of Mineralogist, pp. 147-152. 1890.

Account of mines with brief, incidental geologic references.

BROWN, W. G., and CAMPBELL, H. D. Composition of certain Mesozoic igneous rocks of Virginia.

Geol. Soc. Am. Bull., vol. 2, pp. 339-348.
Abstracts Am. Geologist, vol. 8, p. 54, ½ p.; Am. Naturalist, vol. 25, pp. 1002-1003, ½ p.
Petrographic descriptions and chemical analyses of rocks from several localities, with notes on their occurence.

BROWNE, Ross E. The ancient river beds of the Forest hill divide.

California, 10th Report of Mineralogist, pp. 435-465; 2-sheet map in accompanying pocket.

BROWNE, Ross E.—Continued.

An account of their relations and a discussi of their history.

BRYSON, John. The so-called san dunes of East Hampton, Long Islan [New York.]

Am. Geologist, vol. 8, pp. 188-190.
Points out their nature and discusses their hi tory and significance.

—— Excursion across Long Island [Ne York.]

Am. Geologist, vol. 8, pp. 332-333.
Account of glacial features between Eastpo and Wading river, and discussion of their signi cance.

C.

California.
Alameda county, GOODYEAR.
Amador county, BROWN.
Ancient river beds of the Forest hill divide, BROWNE.
Antiquities from Tuolumne Table mountain, BECKER.
Analyses of rocks, CHATARD.
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Butte county, MINER.
Calaveras county, BROWN.
Chemistry of Mount Diablo rocks, MELVILLE.
Colusa county, GOODYEAR.
Coniferous wood saturated with bitumen, FORD.
Contra Costa county, GOODYEAR.
Cretaceous of northern California, DILLER.
Classification of mountain ranges, UPHAM.
Colorado desert, ORCUTT.
Cretaceous of North America, WHITE, C. A.
Early Cretaceous, BECKER.
Flooding of the Colorodo desert, POWELL.
Fresno county, GOLDSTONE.
Gas well at Summerland, WHEELAN.
Geology of Mother Lode region, FAIRBANKS.
Faunas of Shasta group and Trias from Mineral King district, WHITE, C. A.
Infusorial earths, EDWARDS.
Late volcanic eruption and its peculiar lava, DILLER.
Lake county, GOODYEAR.

California—Continued.
Lassen county, PRESTON.
Los Angeles county, PRESTON.
Manganese deposits, PENROSE.
Marion county, GOODYEAR.
Mariposa county, PRESTON.
Mendocino county, GOODYEAR.
Merced county, WATTS.
Mining of gold ores, HAMMOND.
Modoc county, PRESTON.
Mohawk lake beds, TURNER.
Monterey county, ANGEL.
Mount Diablo, TURNER.
Napa county, GOODYEAR
Nevada county, HOBSON.
Orange county, BOWERS.
Placer county, HOBSON.
Pico Cañon oil field, NORTH.
Plumas county, PRESTON.
Report, California division, U. S Geol. Survey, BECKER.
Report, Cascade division, U. S. Geo Survey, DILLER.
Rincon hill well, IRELAN.
San Joaquin county, WATTS.
Siskiyou county, HOBSON.
Searle's borax marsh, DE GROOT.
Santa Cruz county, WATTS.
Santa Barbara county, ANGEL HOBSON.
Structure of portion of the Sierra Nevada, BECKER.
San Mateo county, WATTS.
San Luis Obispo county, ANGEL.
Santa Clara county, WATTS.
Sacramento county, WATTS.
Sonoma county, GOODYEAR.
Stanislaus county, WATTS.
Stones for building, MERRILL, G. P

California—Continued.
Sutter county, PRESTON.
Tertiary and post-Tertiary changes of Pacific Coast, Le Conte.
Titanic oxide in soils, DUNNINGTON.
Tulare county, ANGEL.
Trinity county, MILLER.
Tuolumne county, GOLDSTONE.
Ventura county, BOWERS.
Yolo county, GOODYEAR. WATTS.

CALL, R. Ellsworth. The Geology of Crowley's ridge.
Arkansas Geol. Survey, Report for 1889, vol. 2, pp. 1-223, plate.
Abstract **Am. Naturalist**, vol. 25, p. 823, ⅛ p.
Descriptions of Tertiary and Pleistocene formations in the Crowley's ridge region, especially in St. Francis county, and review of the geologic history. Accompanied by sections, and colored geologic map of the western part of St. Francis county.

——The Tertiary silicified woods of eastern Arkansas.
Am. Jour. Sci., 3d series, vol. 42, pp. 394-401.
Description of their occurrences and characters, and discussion of their age, stratigraphic distribution and conditions of silicification. Comparison with silicified woods of California and elsewhere.

CALVIN, S. Additional notes on the Devonian rocks of Buchanan county, Iowa.
Am. Geologist, vol. 8, pp. 142-145.
Abstract, **Am. Naturalist**, vol, 25, p. 1127, 4 lines.
Calls attention to the occurrence of a brecciated limestone bed at the base of the Devonian, gives a resume of the various members exposed in Buchanan county, and discusses the stratigraphic relations of certain beds.

Cambrian.
Appalachian (*Vermont to Alabama*). Overthrust fault in Vermont, WALCOTT.
American opinion on the older rocks, WINCHELL, A.
New Jersey Geol. Survey, Report, [Age of white limestones] AM. GEOLOGIST. DANA. SMOCK.
Overlap relations at base of Paleozoics, WALCOTT.
Age of Stockbridge limestone, WOLFF.
Iron ores of Minnesota, WINCHELL, N. H. and H. V.
Equivalents of Minnesota iron ores, WINCHELL, N. H.
Metamorphism of conglomerate schist, WOLFF.
Identity of lower Cambrian in Rutland region, JAMES.

Cambrian—Continued.
Greylock synclinorium, DALE.
Douglas region, central Massachusetts, EMERSON.
Report, division of Archean Geology, [Massachusetts] U. S. Geol. Survey, PUMPELLY.
Cambrian of North America, WALCOTT.
Fauna of lower Cambrian, WALCOTT.
American opinion on the older rocks, WINCHELL, A.
Excursion across Appalachians [Maryland], WILLIAMS, G. H.
Sandstones of Chester Valley, RAND.
Post-Archean age of white limestone of Sussex county, New Jersey, NASON.
Artesian wells in eastern Pennsylvania, CARTER.
Manganese deposit at Cremora, Virginia, HALL, C. W.
Structure of Blue Ridge in Virginia, HITCHCOCK. GEIGER and KEITH.
Piedmont plateau in Maryland, KEYES. WILLIAMS, G. H.
Cambrian of North America, WALCOTT.
[Plateau region of Alabama.] Preface, SMITH.
Cahaba coal field region, MCCALLEY. SMITH.
Overthrust faults of southern Appalachians, HAYES.
Geological survey of Georgia, SPENCER.
Iron ores of Virginia, PECHIN.
South Valley hill [Pennsylvania], RAND.
Canada. Structure of Selkirk range, DAWSON, G. M. WALCOTT.
Nova Scotia, FARIBAULT. MONCKTON.
Notes on Cambrian faunas, MATTHEW.
West Kootanie district, DAWSON, G. M.
Yukon and Mackenzie basins, MCCONNELL.
Causes of spread of Cambrian faunas, MATTHEW.
New horizon in St. John group, MATTHEW.
Fauna of St. John group, MATTHEW.
Environs of Quebec, MARCOU.
Summary reports of Geological Survey, SELWYN.

Cambrian—Continued.
Cambrian of North America, WALCOTT.
Fauna of Lower Cambrian, WALCOTT.
American opinion on the older rocks, WINCHELL, A.
Illinois. Economic geology, WORTHEN.
Lake Superior region. Relations of eastern sandstones, Keweenaw point, WADSWORTH.
Genesis of iron ores, KIMBALL.
South trap range, WADSWORTH
Cambrian of North America, WALCOTT.
American opinion on the older rocks, WINCHELL, A.
Record of observations, WINCHELL, N. H.
Marquette and Keweenaw district, WADSWORTH.
Fauna of Lower Cambrian, WALCOTT.
West of the Mississippi River. Central basin of Texas, CURTICE.
Central mineral region of Texas, COMSTOCK.
Cambrian of North America, WALCOTT.
Ozark series, BROADHEAD.
Report, Rocky Mountain division, U. S. Geol. Survey, EMMONS.
Genesis of iron ores, KIMBALL.
Ore deposits of Pioche, Nevada, MAYNARD.
Great falls coal field, Montana, NEWBERRY.
Report, Montana division, U. S. Geol. Survey, PEALE.
General and nomenclature. Causes of spread of Cambrian faunas, MATTHEW.
Notes on Cambrian faunas, MATTHEW.
Fauna of the lower Cambrian, JAMES.
Biographical notice of E. Emmons, MARCOU. AMI.
Geology of environs of Quebec, MARCOU.
Cambrian of North America, WALCOTT.
Classification of Quebec group rocks, WALCOTT.
American opinion on the older rocks, WINCHELL, A.
Fauna of lower Cambrian, WALCOTT.

Campbell, H. D., and Brown, W. G. Composition of certain Mesozoic igneous rocks of Virginia.
Geol. Soc. Am., Bull., vol. 2, pp. 339-348.
Abstracts, Am. Geologist, vol. 8, p. 54, ½ p.

Campbell, H. D., and Brown, W. G.—Continued.
Am. Naturalist, vol. 25, pp. 1002-1003, ⅛ p.
Petrographic description with chemical analyses of rocks from several localities, with notes on their occurrence.

Canada, including all of British America. Age of the Catskill flora, DAWSON, J. W.
American opinions on the older rocks, WINCHELL, A.
Auriferous series of Nova Scotia, MONCKTON.
Area and duration of Lake Agassiz, UPHAM.
A last word with the Huronian, WINCHELL, A.
Asbestus, ELLS.
Beach phenomena at Quaco, New Brunswick, WHITTLE.
Age of rocks at Quebec, SELWYN.
Cambrian of North America, WALCOTT.
Carboniferous fossils from Newfoundland, DAWSON, J. W.
Carboniferous conglomerate of Nova Scotia, GILPIN.
Causes of spread of Cambrian faunas, MATTHEW.
Classification of Quebec group rocks, WALCOTT.
Chazy formation in the Champlain valley, BRAINERD.
Chemical contributions, HOFFMAN.
Country northwest of Lake Superior, LAWSON.
Country north of Lesser Slave lake, MCCONNELL.
Cretaceous formations of North America, WHITE, C. A.
Criteria of englacial and subglacial drift, UPHAM.
Cretaceous of North America, WHITE, C. A.
Davis on the Iroquois beach, SPENCER.
Devonian of Cape Breton, GILPIN.
Deformation of the Algonquin beach, SPENCER.
Devonian and Carboniferous, correlation, WILLIAMS, H. S.
Early Cretaceous of California and Oregon, BECKER.
Exploration in Yukon and Mackenzie basins, MCCONNELL.
Facts noted on Grand river, Labrador, CARY.

Canada, including all of British America—Continued.

Fauna of St. John's group, MATTHEW.
Fauna of lower Cambrian, WALCOTT.
Formation of Toronto island, CLARK, L. J.
Fish remains, New Brunswick, MATTHEW.
Foraminifera and radiolaria from Cretaceous of Manitoba, TYRRELL.
Fossil plants from Similkameen valley, DAWSON, J. W.
Fossils from Silurian of Saskatchewan district, WHITEAVES.
Genesis of manganese deposits, New Brunswick, WHITTLE.
Glacial Lake Agassiz in Manitoba, UPHAM.
Glacial geology of Cape Breton, HONEYMAN.
Gleanings in Nova Scotia and Cape Breton, HONEYMAN.
Geology of environs of Quebec, MARCOU.
Geology of Steep rock lake, Ontario, SMYTH.
Gold series, Nova Scotia, FARIBAULT.
Glacial lakes in Canada, UPHAM.
Geology of Quebec city, AMI.
Geology of Selkirk range, DAWSON, G. M. WALCOTT.
Glaciation of Great Plains region, DAWSON, G. M.
Granites of British Columbia, ADAMS.
High level shores of Great Lakes and their deformation, SPENCER.
Inequality of distribution of englacial drift, UPHAM.
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Am. Geologist, vol. 8, pp. 1–7.

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A condensed description of the structure and stratigraphy of the Greylock region and a postulation of certain structural principles which are therein illustrated.

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Am. Jour. Sci., 3d series, vol. 42, pp. 79–110, pls. 2, 7.

Description of the relations of the traps and sandstones in the New Haven region, with a comment on their general bearing.

DANA, James D.—Continued.

—— On Percival's map of the trap belts of central Connecticut, with observations on the upturning or mountain-making disturbance of the formation.

Am. Jour. Sci., 3d series, vol. 42, pp. 439–447, pl. 16.

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—— The four "rocks," with walks and drives about New Haven, 120 pages, 7 plates, New Haven

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Geol. Soc. Am., Bull., vol. 2, pp. 431–450, pl. 16.

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—— Geology of sedimentary rocks. Washington sheet, Maryland, District of Columbia, Virginia. U. S. Geological Survey.

Guide to Washington, prepared for the International Congress of Geologists, Fifth Session, Washington. In back. Folded, colored geologic map, with geology of crystalline rocks, by G. H. Williams.

—— Clastic formations of Washington.

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Am. Jour. Sci., 3d series, vol. 41, pp. 102–105.

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Descriptions of the several classes of deposits, and discussion of their geologic relations and history.

—— **Record of a deep well at Lake Worth, southern Florida.**

Am. Jour. Sci., 3d series, vol. 41, pp. 105–106.

Brief notes on materials penetrated in a 1212-foot well, and statements in regard to the age and limits of the beds.

—— **The relations of the traps of the Newark system in [the] New Jersey [region].**

Am. Naturalist, vol. 25, p. 910, ½ p.

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—— **On a jointed earth-auger for geological explorations in soft deposits.**

Am. Geologist, vol 7, pp. 117–119.

Engineering and Mining Jour., vol. 51, p. 401, ½ col. 4°.

Abstract, **Geol Soc. Am., Bull., vol. 2, p. 638, 8 lines.**

Instructions for its construction and use.

DAVIDSON, Walter B. M. Suggestions as to the origin and deposition of Florida phosphates.

Engineering and Mining Jour., vol. 51, pp. 628–629, 4°.

—— **A phosphatic chalk at Taplow, England.**

Engineering and Mining Jour., vol. 52, p. 502, ⅔ col. 4°.

Extracts from a paper with this title by M. A. Strahan, who holds that the phosphoric acid in the deposits was mainly derived from fishes. Suggests that the Florida phosphates were similarly derived.

DAVIS, William M. The geological dates of origin of certain topographic forms on the Atlantic slope of the United States.

Geol. Soc. Am., Bull., vol. 2, pp. 541–542, 545–586.

Abstract, **Am. Geologist, vol. 8, p. 260, ¼ p.**

DAVIS, William M.—Continued.

A preliminary analysis of the topographic development of the Atlantic slope, with a brief chapter on genetic topographic classification in general, and comments on the representation of dates of topographic forms by colored maps.

—— **Introductory statement. Two belts of fossiliferous black shale in the Triassic formation in Connecticut.**

Geol. Soc. Am., Bull., vol. 2, pp. 415–424, 430.

Abstracts, **Am. Geologist, vol. 8, p. 118, ⅔ p.**

Am. Jour. Sci., 3d series, vol. 42, pp. 72–73.

An account of the relations about Meriden, in which are discussed the origin of the deposits, formation of the trap sheets, deformation, topographic expression of structure, and the structure and stratigraphy in the Meriden region. Discussed by B. K. Emerson, p. 430.

—— **[Age and extent of the overthrusts in the southern Appalachians.]**

Geol. Soc. Am., Bull., vol. 2, pp. 153–154, ½ p.

Abstract, **Am. Geologist, vol. 7, p. 262, ⅛ p.**

In discussion of paper by C. W. Hayes "The overthrust faults of the southern Appalachians." Presentation of evidence correlating them with the post-Newark deformation and suggestion of means for determinining their original extent.

—— **The physical geography of southern New England.**

Johns Hopkins Univ., Circulars, vol. 10, No. 87, pp. 78–79, ⅛ p., 4°.

An analysis of the development of the topography of the region from the Cretaceous to the present time.

—— **The Triassic sandstone of the Connecticut Valley.**

Johns Hopkins Univ., Circulars, vol. 10, No. 87, p. 79, ½ col., 4°.

Description of a model illustrating the history of the region from the Triassic to the beginning of the Pleistocene.

—— **The lost volcanoes of Connecticut.**

Popular Science Monthly, vol. 40, pp. 221–235.

Account of relations and history of igneous members of the Newark formation in the Connecticut valley, and description of a model exhibiting the development of the structure of the region.

—— **Was Lake Iroquois an arm of the sea?**

Am. Geologist, vol. 7, pp. 139–140.

Reviewed by J. W. Spencer, ibid., pp. 266–267, ⅔ p.

Discussion of the conditions attending the presence of Lake Iroquois, especially in connection with its outlet.

—— **Structure and origin of glacial sand plains.**

Am. Geologist, vol. 7, p. 141, ¼ p.

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Texas, Geol. Survey, Second Annual Report, pp. 303–317.

Description of stratigraphy and economic resources.

—— [Iron ore district of east Texas] Houston county.

Texas, Geol. Survey, Second Annual Report, pp. 318–326.

Notes on stratigraphy and economic resources and analyses of soils.

—— Important results of the Texas survey.

Am. Geologist, vol. 7, pp. 267–269.

DUMBLE, E. T.—Continued.

Includes account of the relations of the Triassic to Carboniferous in north Texas as determined by Cummins, and of new light on Cretaceous stratigraphy in western Texas due to Streeruwitz.

DUNNINGTON, F. P. Distribution of titanic oxide upon the surface of the earth.

Am. Jour. Sci., 3d series, vol. 42, pp. 491–495.

Gives analyses of soils from Virginia, West Virginia, Maryland, North Carolina, South Carolina, Indiana, Tennessee, Alabama, Mississippi, Arkansas, Missouri, Montana, Nevada, California, and from Europe, Asia, and Oceanica.

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EAKINS, L. G. Five Cherokee limestones. [Analyses].

U. S. Geol. Survey, Bull. No. 78, p. 125, ⅓ p.

From the lead-zinc region of southwestern Missouri.

East Indies. Permian, Triassic, and Jurassic of Timor and Rotti, ROTHPLETZ.

EDWARDS, Arthur M. Report of the examination by means of the microscope of specimens of infusorial earths of the Pacific Coast of the United States.

Am. Jour. Sci., 3d series, vol. 42, pp. 369–385.

Includes notes on the localities and discussion of the stratigraphic distribution of the forms. In a supplemental note considers the age of the "Great Basin" deposits.

ELDRIDGE, G. H. The Florence oil fields, Colorado.

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—— [Mode of deposition of the Lafayette formation in the Mississippi valley.]

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—— Notes on the geology of the Southwest.

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HILL, Robert T.—Continued.

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Am. Naturalist, vol. 25, p. 403, ¼ p.

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Elisha Mitchell, Sci. Soc., Jour., 1890, pp. 89-117.

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Nova Scotian Inst., Trans., vol. 7, pp. 337-344. 1890.

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HONEYMAN, D.—Continued.

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Am. Geologist, vol. 7, pp. 68–69, ¾ p.

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Engineering and Mining Jour., vol. 51, pp. 693–695, 4°.

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WENDT, Arthur F. The Potosi, Bolivia, silver district.

Am. Inst. Mining Engineers, Trans., vol. 19, pp. 74–104, map.

Abstract, Am. Geologist, vol. 8, p. 307, ¼ p.

Includes an account of the Paleozoic, Mesozoic, and Tertiary formations, volcanic rocks, old lake deposits, evidence of glacial action, vein structure, and age of the veins. Accompanied by a folded colored geological map.

West Indies. Phosphate deposits of Navassa, D'INVILLIERS.

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California, 10th Report of Mineralogist, pp. 601–603, 1890.

Includes the record of a 104-foot boring.

WHITE, C. A. Correlation papers, Cretaceous. A review of the Cretaceous formations of North America. U. S. Geol. Survey, Bull. No. 82, 273 pages, 3 plates, Washington.

A summary of the present knowledge of the North American Cretaceous and discussion of the classification and correlation of its formations. Includes a review of the principles of classification and an annotated list of the principal literature of the Cretaceous.

—— The Texas Permian and its Mesozoic types of fossils. U. S. Geol. Survey, Bull., No. 77, 51 pages, 4 plates, Washington.

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A description of the species, preceded by a general description of the Texas Permian and a discussion of its faunal characteristics.

—— Report, Mesozoic division of invertebrate paleontology.

U. S. Geol. Survey, 10th Report, J. W. Powell, pp. 162–165. Abstract, *Ibid.*, pp. 39–40, ½ p., 1890.

Includes references to observations on the commingling of Permian and Mesozoic faunas in the Texas Permian, and on the relations of the Cretaceous formations of the Gulf coast to those of the interior region.

—— On the biological and geological significance of closely similar fossil forms.

Am. Assoc. Adv. Science, Proc., vol. 39, pp. 239–243.

Abstract, Am. Geologist, vol. 7, pp. 374–375, ⅔ p.

Includes references to classification of certain similar forms and general remarks on their distribution.

—— [On the fauna of the "Shasta group" and of the supposed Trias from the Mineral King district.]

WHITE, C. A.—Continued.

Geol. Soc. Am., Bull., vol. 2, p. 208.

In discussion of paper by G. F. Becker: "Notes on the early Cretaceous of California and Oregon."

—— [Remarks on classification of Cretaceous members in southern interior North America.]

Geol. Soc. Am., Bull., vol. 2, pp. 525–526.

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Geol. Soc. Am., Bull., vol. 2, p. 606, ¼ p.

In discussion of paper by D. W. Langdon: "Variations in the Cretaceous and Tertiary strata of Alabama."

—— On certain Mesozoic fossils from the islands of St. Paul's and St. Peter's, in the Straits of Magellen.

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Boston Soc. Nat. Hist., Proc., vol. 25, pp. 253–258.

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WILLIAMS, George Huntington. The petrography and structure of the Piedmont plateau in Maryland.

Geol. Soc. Am., Bull., vol. 2, pp. 301–317, 318, pl. 12.

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WILLIAMS, Geo. Huntington—Cont'd.

Descriptions of the rocks and discussion of their relations and history and of the structure of the region. Illustrated by a geologic map.

—— The silicified glass-breccia of Vermillion river, Sudbury district.

Geol. Soc. Am., Bull., vol. 2, pp. 138–140.

Abstracts, Am. Geologist, vol. 7, p. 261, 3 lines; Am. Naturalist, vol. 25, pp. 1005–1006, ¼ p.

Petrographic description and discussion of its nature.

—— [On transition of crystalline and semi-crystalline rocks in eastern Maryland.]

Geol. Soc. Am., Bull., vol. 2, p. 223, ¼ p.

In discussion of paper by R. Pumpelly: "The relation of secular rock disintegration to certain transitional crystalline schists."

—— [Fossils in the Newark formation of Frederick county, Maryland.]

Geol. Soc. Am., Bull., vol. 2, p. 318, ⅛ p.

Statement of localities and of the general nature of the fossils.

—— Anglesite, cerussite and sulphur from the Mountain View lead mine, near Union Bridge, Carroll county, Maryland.

Johns Hopkins Univ. Circulars, vol. 10, pp. 73–75, No. 87, 4°.

Includes a brief prefatory account of the geology of the vicinity.

—— Geology of crystalline rocks. Washington sheet. Maryland, District of Columbia, Virginia. U. S. Geological Survey.

Guide to Washington, prepared for the International Congress of Geologists, Fifth Session, Washington. In back.

Folded colored geologic map, with geology of sedimentary rocks, by N. H. Darton.

—— The rocks and their relations [Piedmont plateau].

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Description of the general features and leading rock types.

—— The work on the crystalline rocks of Maryland.

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Abstract, Ib., pp. 31–32.

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—— The geological excursion by university students across the Appalachians in May, 1891.

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Geologic notes from Baltimore via Washington to the Cumberland plateau, including Harper's Ferry, Hancock, Cumberland, and the coal mines at Lonaconing.

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Am. Naturalist, vol. 25, pp. 572–574.

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—— What is the Carboniferous system? [Abstract.]

Geol. Soc. Am., Bull., vol. 2, pp. 16–20.

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Arkansas, Geol. Survey, Report for 1891, vol. 2, pp. 1–391, 429–457, 22 plates, 8 maps.

Descriptions of the relations and petrography of the igneous and associated rocks in the several districts. Accompanied by folded, colored geologic maps.

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Table in which locality, strike, dip, wall rock, and petrographic peculiarities are listed.

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Am. Geologist, vol. 8, pp. 315–324.

A discussion of the nature of the conditions to which they are due, especially their relation to earth-crust movements.

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School of Mines Quart., vol. 12, pp. 319–333.

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U. S. Geol. Survey, 10th Report, J. W. Powell, pp. 119-122, 1890.

Includes some general statements rgarding Appalachian stratigraphy and the mechanism of faults.

—— **[On the relations existing between faulting and the arrangement of strata in the vertical column, in the Appalachian region.]**

Geol. Soc. Am., Bull., vol. 2., p. 154, ¼ p.

In discussion of paper by C. W. Hayes: "The overthrust faults of the Southern Appalachians." Points out certain relations which determine the nature and distribution of faults in the Appalachians.

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Brief statement of the nature and size of its component organisms.

WINCHELL, Alexander. **A last word with the Huronian.**

Geol. Soc. Am., Bull., vol. 2, pp. 85-124.

Abstracts, **Am. Naturalist**, vol. 25, pp. 651-652; **Am. Geologist**, vol. 7, p. 261, ½ p.

Review of the original application of the name, discussion of the structual and lithological discordance between the two systems which it comprised in the various regions, account of personal observation in the Echo Lake region and conclusions regarding the restriction of the term "Huronian."

—— **American opinion on the older rocks.**

Minnesota, Geol. Survey, 18th Report, pp. 65-219 [date?].

Review of writings of E. Emmons, D. Houghton, E. Hitchcock, H. D. Rogers, J. Hall, W. E. Logan, J. D. Whitney, T. S. Hunt, G. F. Matthew, C. H. Hitchcock, T. B. Brooks, W. H. Winchell, C. Rominger, R. D. Irving, A. C. Lawson, with citations from some others, on Archean, Algonkian, and Cambrian of North America.

—— **Recent observations on some Canadian rocks.**

Am. Naturalist, vol. 25, pp. 365-366, ¼ p.

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Am. Jour. Sci., 3d series, vol. 41, pp. 386-390.

Discussion of its relations to surrounding rocks, the significance of the occurrence of an included band of chalcedonic silica and the bearing of the age of the granite on the equivalency and history of certain other rocks in northern Minnesota.

——, **WINCHELL**, N. H., and. **The iron ores of Minnesota, their geology, discovery, development, qualities and origin, and comparison with those of other iron districts. Minnesota, Geol.**

WINCHELL, N. H., and Horace V.—Con. **Survey, Bull. No. 6, 430 pages, 44 plates, including three folded maps, Minneapolis.**

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Minnesota, Geol. Survey Bull. No. 6, pp. 400-410.

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WINCHELL, N. H. **Record of field observations.**

Minnesota, Geol. Survey, 18th Report, pp. 7-63 [date?].

Abstracts, **Am. Geologist**, vol. 7, pp. 198-199, ⅓ p. **Am. Naturalist**, vol. 25, pp. 737-738, ½ p.

Mesabi iron range; about Tower; at Ely; Pokegama Falls and eastward; gold in the Keewatin in northern part of the state; crystalline rocks of Minnesota valley; at Duluth; on relations and age of the gabbro of the typical Huronian, and on the rocks about Sudbury, Ontario.

—— **The eastern equivalents of the Minnesota iron ores.**

Minnesota, Geol. Survey, Bull. No. 6, pp. 411-419

Read to Minnesota Academy of Science, Oct. 7, 1890.

Comparison of Minnesota ore deposits with the iron deposits of other regions, especially those of New York and western New England, with comments on geologic relations and nomenclature in the "Taconic" region.

—— **What constitutes the Taconic mountains? [Abstract.]**

Am. Assoc. Adv. Science, Proc., vol. 39, pp. 246-247, ¼ p.

—— and **WINCHELL**, H. V. **The iron ores of Minnesota, their geology, discovery, development, qualities, and**

WINCHELL, N. H. and H. V.—Cont'd.

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Minnesota, Geol. Survey, Bull. No. 6, 430 pages, 44 plates, including three folded maps Minneapolis.

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Includes an extended description of their characters and geologic relations, a comparison of the ores of Minnesota with those of Michigan, Wisconsin, and the "Taconic" region, and a discussion of their age and origin and of the origin of iron ores in general, with a bibliography of the origin of iron ores. Illustrated by a colored geologic map and with plates of microscopic rock-sections. In appendices A, B, C, are republished "On a possible chemical origin of the ores of the Keewatin in Minnesota" and "The Taconic iron ores of Minnesota and western New England", by N. H. and H. V. Winchell, and "The eastern equivalents of the Minnesota iron ores", by N. H. Winchell.

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WINSLOW, Arthur. The geotectonic and physiographic geology of western Arkansas.

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Abstracts, **Am. Geologist,** vol. 7, p. 259, ⅓ p.; **Am. Naturalist,** vol. 25, p. 364, 6 lines.

Description of physiography and structure, and discussion of the character, age, and cause of the flexing, the genesis of the physiography, and the age of the rocks. Discussed by T. M. Reade, Am. Geologist, vol. 8, pp. 275–287.

—— Geological survey of Missouri. Biennial Report of the State Geologist transmitted by the Bureau of Geology and Mines to the General Assembly, 53 pages, 2 plates.

Contains a history of geologic exploration in the state.

—— Remarks on the construction of topographic maps for geologic purposes. [Abstract.]

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A last word with the Huronian, WINCHELL, A.

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Altitude of United States during glaical period, CHAMBERLIN.

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Lake Superior stratigraphy, LAWSON. VAN HISE.

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Rock feature at Appleton, CRAMER.

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WOLFF, J. E. On the lower Cambrian age of the Stockridge limestone.

Geol. Soc. Am., Bull., vol. 2, pp. 331–337.

Abstracts, **Am. Geologist,** vol. 8, p. 117, ½ p.; **Am. Jour., Sci.,** 3d series, vol. 41, p. 435, ¼ p.

Description of the relations in the vicinity of Rutland, Vermont, announcement of the discovery of Cambrian fossils in the limestone and discussion of the structure and age of the formations in that district. Preceded by a review of previous opinions. Discussed by J. F. James, p. 338.

—— Metamorphism of clastic feldspar in conglomerate schist.

Harvard Coll., Mus. Comp. Zool., Bull., vol. 17, pp. 173–184, 2 pls.

Description of petrography of specimens from Green Mountain region in New England, with a brief account of the relations of the rocks.

—— On some occurrences of ottrelite and ilmenite schist in New England.

Am. Naturalist, vol. 25, p. 1005, ⅓ p.

Abstract of paper described in Record for 1890.

WOOLMAN, Lewis. Artesian wells and water-bearing horizons of southern New Jersey [with a "note on the extension southward of diatomaceous clays and the occurrence there of flowing artesian wells."]

New Jersey, Geol. Survey, Report for 1890, pp. 269–276.

Discussion of the structure and stratigraphy of the water bearing strata in southern New Jersey and references to occurrences of the diatomaceous clays of the series in outcrops and wells at various points in Maryland and Virginia.

WORTHEN, A. H. Approximate geological map of the state of Illinois reduced from the map published in 1875,

WORTHEN, A. H.—Continued.

with volume 6, Geological Survey of Illinois.

Illinois, Geol. Survey, Geology and Paleontology, vol. 8, plate at end.

Black and white map, scale 32 miles to the inch.

—— Drift deposits of Illinois.

Illinois, Geol. Survey, Geology and Paleontology, vol. 8, pp. 1-24, 1890.

Abstract, **Geol. Magazine**, 3d decade, vol. 8, p. 322, ½ p.

Account of the character and relations of the drifts and the occurrence of pre-Pleistocene fossils, with remarks on the Cretaceous to Pleistocene history.

—— Economical geology.

Illinois, Geol. Survey, Geology and Paleontology, vol. 8, pp. 25-67, 1890.

Account of deep borings in various parts of the state, mainly in the coal region, with comments on the stratigraphy of the beds penetrated.

WRIGHT, G. Frederick. Mr. Cushing and the Muir glacier.

Am. Geologist, vol. 8, pp. 330-331.

Discusses the conditions under which forests were buried on the west side of the inlet.

—— Additional notes concerning the Nampa image.

Boston Soc. Nat. Hist., Proc., vol. 25, pp. 242-246.

Includes a discussion of the age of the beds and the source and relations of the lava beds of the region.

—— Additional notes concerning the Nampa image.

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—— Man and the glacial period.

Popular Science Monthly, vol. 39, pp. 314-319.

From supplementary notes to new edition of "The Ice Age in North America."

References to discoveries of human implements at Newcomerstown, Ohio; Nampa, Idaho, and Bald mountain, California, with notes on the geological conditions under which they occur.

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Am. Geologist, vol. 8, p. 266, ⅔ p.

Includes brief reference to the character of the grooves and to the conditions of glaciation in the region.

WYATT, Francis. The phosphates of America, 187 pages, New York.

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Wyoming. Cambrian of North America, WALCOTT.

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Geological horizons as determined by vertebrte fossils, MARSH.

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Spherulite crystallization, IDDINGS.

Stones for building, MERRILL, G. P.

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